NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section \_\_\_\_\_\_\_

**Trigonometric Identities**

**Find the exact value of each expression if 0° < *θ* < 90°.**

1. If tan *θ* = 1, find sec *θ*.
2. If tan http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_001.jpg, find cos *θ*.
3. If sec *θ* = 2, find cos *θ*.
4. If cos http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_002.jpg, find csc *θ*.

**Find the exact value of each expression if 90° < *θ* < 180°.**

1. If cos http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_003.jpg, find sin *θ*.
2. If cot http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_004.jpg, find cos *θ*.

**Find the exact value of each expression if 180° < *θ* < 270°.**

1. If tan *θ* = 1, find cos *θ*.
2. If sin http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_005.jpg, find tan *θ*.
3. If csc *θ* = -2, find cos *θ*.
4. If cos http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_006.jpg, find tan *θ*.
5. If csc *θ* = -2, find cot *θ*.
6. If sin http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_007.jpg, find tan *θ*.

**Simplify each expression.**

1. sin *θ* sec *θ*
2. csc *θ* sin *θ*
3. cot *θ* sec *θ*
4. http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_008.jpg
5. tan *θ* + cot *θ*
6. csc *θ* tan *θ* − tan *θ* sin *θ*
7. http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_009.jpg
8. csc *θ* + cot *θ*
9. http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_010.jpg
10. http://glencoe.com/sites/common_assets/mathematics/alg2_2010/worksheets/html/gln_ma_a2crmch14/gln_ma_a2crmch14_7/images/pg7_011.jpg